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SLP-76 (D1R1A) Rabbit mAb (PE Conjugate)



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| Applications: FC-FP | Reactivity: H | Sensitivity: Endogenous | Source/Isotype: Rabbit IgG | UniProt ID: #Q13094 | Entrez-Gene Id: 3937 |
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| Product Usage Information | Application Flow Cytometry (Fixed/Permeabilized) | Dilution 1:50 |
| Storage | Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze. | |
| Specificity / Sensitivity | SLP-76 (D1R1A) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total SLP-76 protein. | |
| Source / Purification | Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro390 of human SLP-76 protein. | |
| Product Description | This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated SLP-76 (D1R1A) Rabbit mAb #70896. | |
| Background | SH2 domain-containing leukocyte protein of 76 kDa (SLP-76) is a hematopoietic adaptor protein that is important in multiple biochemical signaling pathways and necessary for T cell development and activation (1). ZAP-70 phosphorylates SLP-76 and LAT as a result of TCR ligation. SLP-76 has amino-terminal tyrosine residues followed by a proline-rich domain and a carboxy-terminal SH2 domain. Phosphorylation of Tyr113 and Tyr128 result in recruitment of the GEF Vav and the adaptor protein Nck (2). TCR ligation also leads to phosphorylation of Tyr145, which mediates an association between SLP-76 and Itk, which is accomplished in part via the proline-rich domain of SLP-76 and the SH3 domain of Itk (3). Furthermore, the proline-rich domain of SLP-76 binds to the SH3 domains of Grb2-like adaptor Gads (3,4). In resting cells, SLP-76 is predominantly in the cytosol. Upon TCR ligation, SLP-76 translocates to the plasma membrane and promotes the assembly of a multi-protein signaling complex that includes Vav, Nck, Itk, and PLCγ1 (1). The expression of SLP-76 is tightly regulated; the protein is detected at very early stages of thymocyte development, increases as thymocyte maturation progresses, and is reduced as cells mature to CD4 ⁺ CD8 ⁺ double-positive thymocytes (5). | |
| Background References | 1. Clements, J.L. (2003) <i>Immunol Rev</i> 191, 211-9. 2. Bubeck Wardenburg, J. et al. (1998) <i>Immunity</i> 9, 607-16. 3. Bunnell, S.C. et al. (2000) <i>J Biol Chem</i> 275, 2219-30. 4. Liu, S.K. et al. (1999) <i>Curr Biol</i> 9, 67-75. 5. Clements, J.L. et al. (1998) <i>J Immunol</i> 161, 3880-9. | |
| Species Reactivity | Species reactivity is determined by testing in at least one approved application (e.g., western blot). | |
| Applications Key | FC-FP: Flow Cytometry (Fixed/Permeabilized) | |
| Cross-Reactivity Key | H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected | |
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